

Appendix A

Entities Interviewed or Provided Comment on Report

Wind Power Developers

- Evergreen Wind Power LLC
- Endless Energy
- Linekin Bay Energy Co.

State Agencies

- Department of Environmental Protection
- Land Use Regulatory Commission
- Finance Authority of Maine
- Director of Energy Independence
- Connecticut Division of Energy Resources

Utilities

- Central Maine Power
- Maine Public Service
- New Brunswick Power
- Fox Island Cooperative

System Operators

- ISO-NE
- Northern Maine ISA

Wind Power Experts or Consultants

- Energy Ventures Analysis
- Distributed Generation Systems
- Vermont Environmental Research Associates
- XCEL Energy

Wind Power Critics

- Maine Appalachian Trail Club
- Dain & Vera Trafton

Native American Tribes

- Passamaquoddy
- Penobscot
- Maliseet
- Micmac

Environmental or Research Organizations

- Natural Resources Counsel of Maine
- Pacific Northwest National Laboratory
- Massachusetts Technology Collaborative
- TrueWind Solutions, Inc

Renewable Generation Developers

- Ridgewood Renewable Power

Appendix B Classes of Wind Power Density at 10 Meters and 50 Meters

Classes of Wind Power Density at 10 m and 50 m ^(a)				
		10 m (33 ft)	50 m (164 ft)	
Wind Power Class	Wind Power Density (W/m ²)	Speed ^(b) m/s (mph)	Wind Power Density (W/m ²)	Speed ^(b) m/s (mph)
1	<100	<4.4 (9.8)	<200	<5.6 (12.5)
2	100 - 150	4.4 (9.8)/5.1 (11.5)	200 - 300	5.6 (12.5)/6.4 (14.3)
3	150 - 200	5.1 (11.5)/5.6 (12.5)	300 - 400	6.4 (14.3)/7.0 (15.7)
4	200 - 250	5.6 (12.5)/6.0 (13.4)	400 - 500	7.0 (15.7)/7.5 (16.8)
5	250 - 300	6.0 (13.4)/6.4 (14.3)	500 - 600	7.5 (16.8)/8.0 (17.9)
6	300 - 400	6.4 (14.3)/7.0 (15.7)	600 - 800	8.0 (17.9)/8.8 (19.7)
7	>400	>7.0 (15.7)	>800	>8.8 (19.7)

(a) Vertical extrapolation of wind speed based on the 1/7 power law

(b) Mean wind speed is based on the Rayleigh speed distribution of equivalent wind power density. Wind speed is for standard sea-level conditions. To maintain the same power density, speed increases 3%/1000 m (5%/5000 ft) of elevation.

(from the Battelle Wind Energy Resource Atlas)

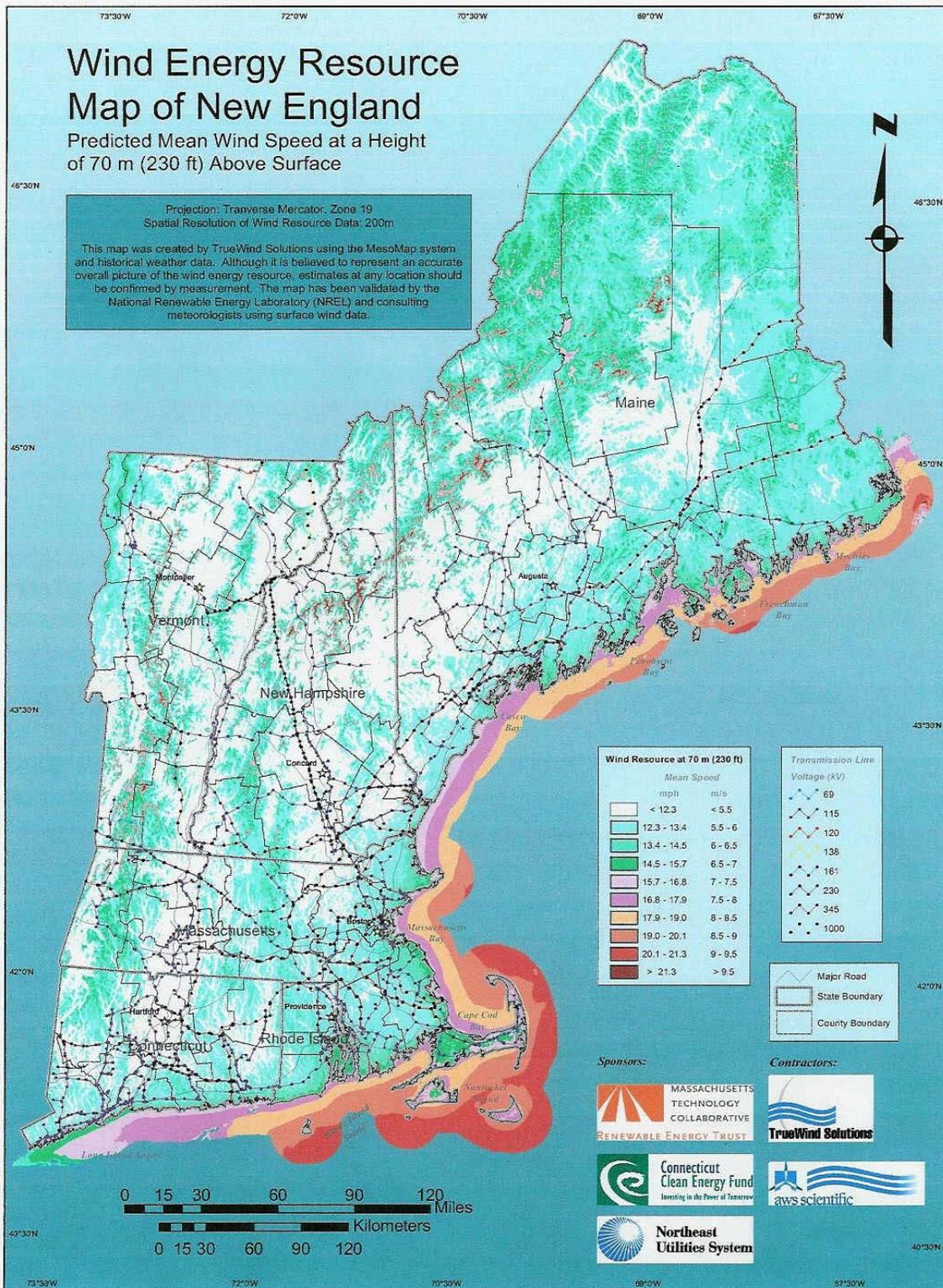
Source: American Wind Energy Association web page. The table was developed by the Pacific Northwest Laboratory. Wind densities at higher elevations typical of newer wind turbines have not been calculated.

Category 4 wind class density is typically considered necessary for viable wind generation. However, it is generally thought that category 3 conditions are adequate for many sites in Maine using newer wind technologies.

Appendix C

Wind Energy Resource Map

Wind Speeds at 70 Meters



Appendix D
Physical Wind Potential in Twenty States
Factoring in Some Environmental and Land Use Exclusions
Wind Class 3 or Higher

<u>State</u>	<u>Annual Potential (Billions of kWhs)</u>
North Dakota	1,210
Texas	1,190
Kansas	1,070
South Dakota	1,030
Montana	1,020
Nebraska	868
Wyoming	747
Oklahoma	725
Minnesota	657
Iowa	551
Colorado	481
New Mexico	435
Idaho	73
Michigan	65
New York	62
Illinois	61
California	59
Wisconsin	58
Maine	56
Missouri	52

Source: *An Assessment of the Available Windy Land Area and Wind Energy Potential in the Contiguous United States, Pacific Northwest Laboratory, 1991.*

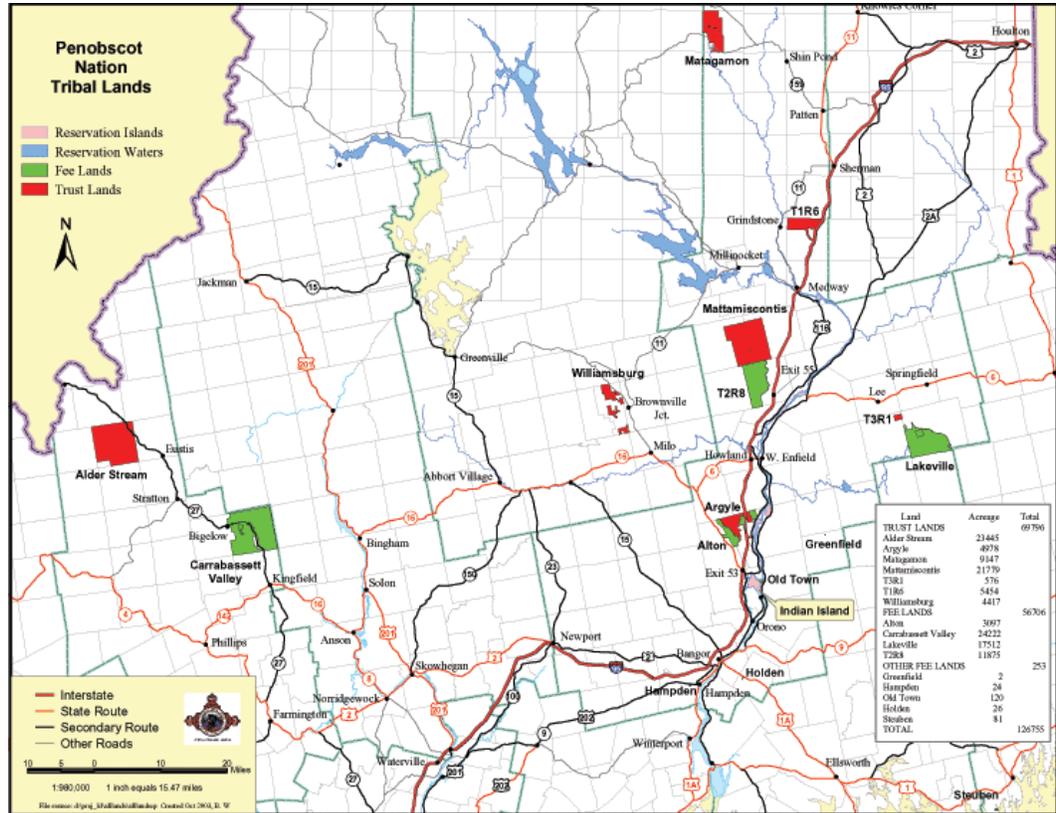
Appendix E
Further Refinement of the Physical Wind Potential in Northeast States
Factoring in Environmental and Land Use Exclusions that Extend Beyond
Those in Appendix D

MW's of Wind Potential Class 3 and Above

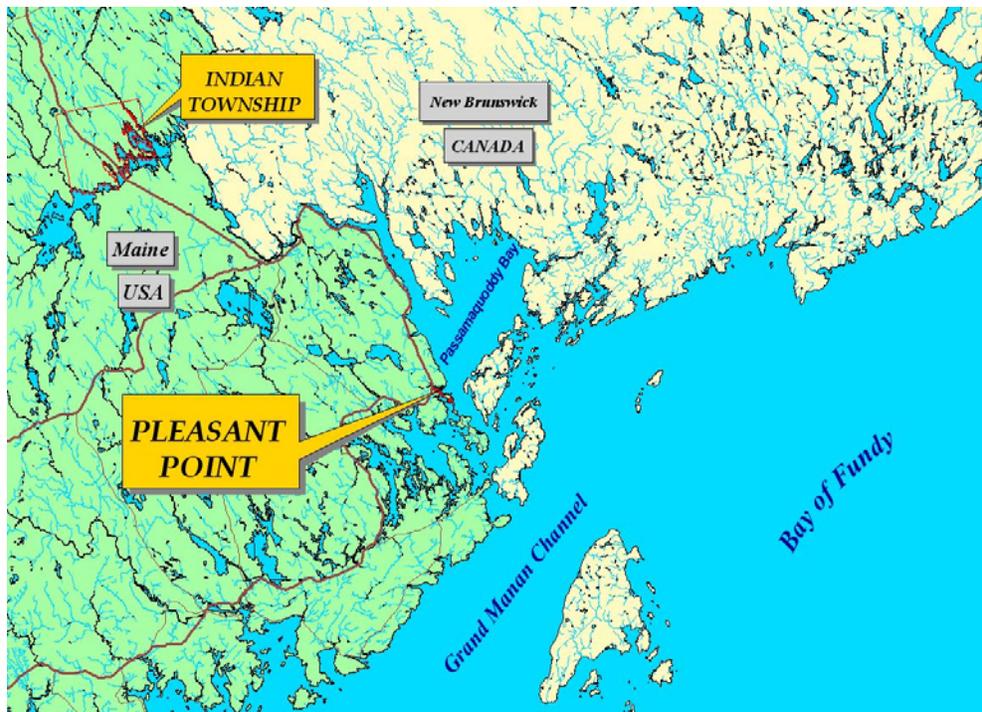
	Miles from Transmission				<u>Total</u>
	<u>0-5</u>	<u>5-10</u>	<u>10-20</u>	<u>>20</u>	
Maine	981	1,898	2,892	2,433	8,205
Connecticut	0	0	43	0	43
Massachusetts	1,614	525	772	427	3,338
New Hampshire	1,774	1,499	919	548	4,740
Vermont	1,817	2,085	1,637	28	5,567
Rhode Island	4	85	25	0	113
Delaware	188	83	1		272
Maryland	687	383	1,266	163	2,499
New Jersey	53	83	178	0	314
New York	18,433	8,535	2,330	315	29,614
Pennsylvania	2,215	878	138	0	3,231
West Virginia	2,146	1,648	662	22	4,478

Appendix F Location of Tribal Land

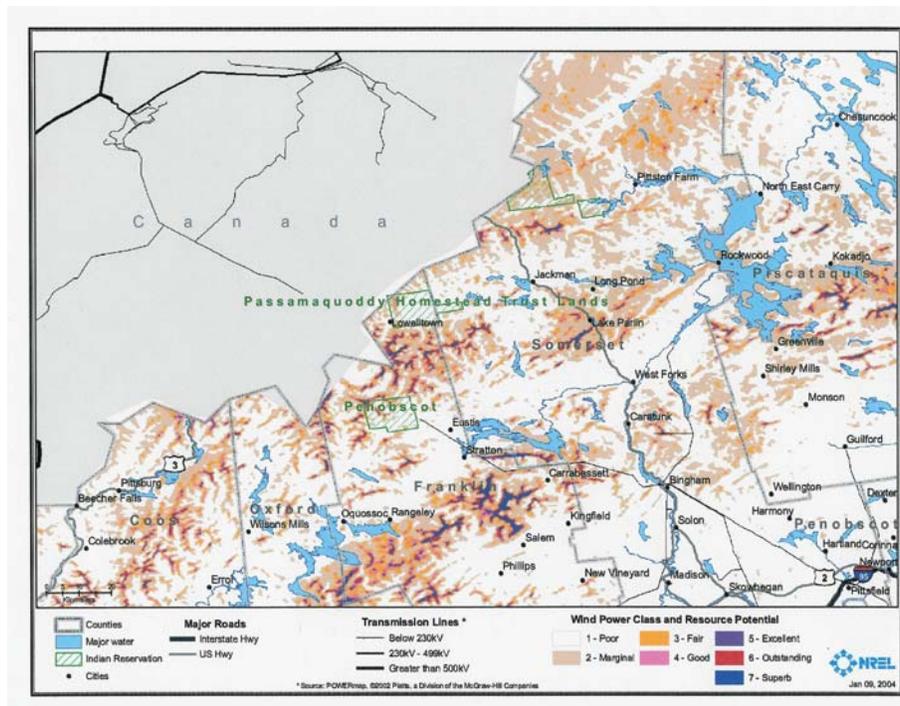
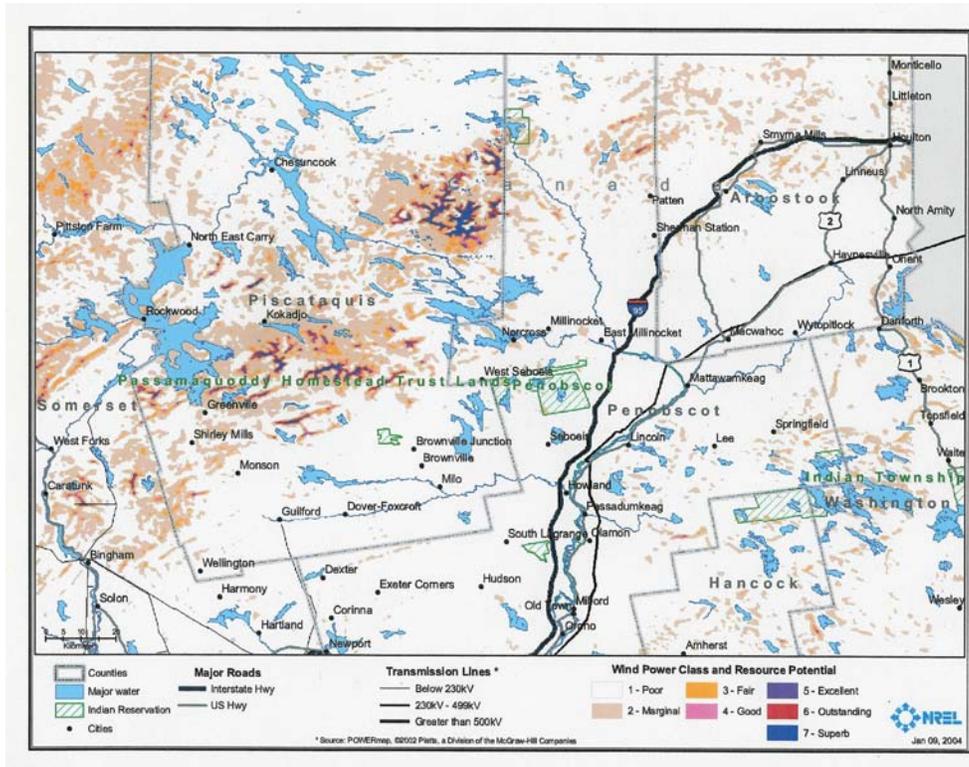
Penobscott Tribal Lands



Passamaquoddy Tribal Lands

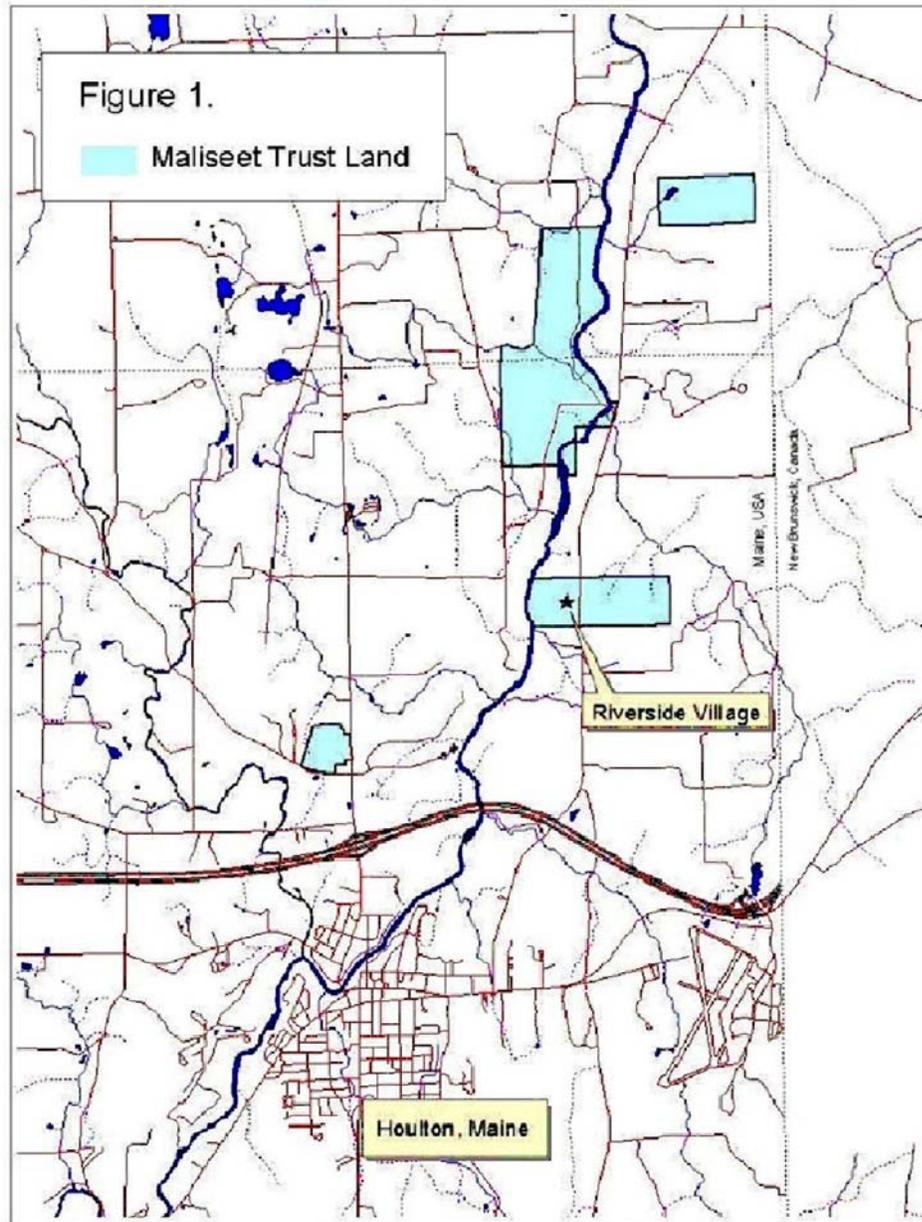


Appendix F Continued Location of Tribal Land Wind Power on Various Tribal Lands



**Appendix F Continued
Location of Tribal Land**

Maliseet Tribal Lands



**Appendix F Continued
Location of Tribal Land**

Micmac Tribal Lands

